

### **REMARKS**

Claims 12, 14, 16-18, and 20-37 were pending. The Examiner rejected claims 12, 14, 17, 18, 20, 22-27, 29-34, 36, and 37, and withdrew claims 16, 21, 28, and 35 as drawn to non-elected subject matter. Applicants have herein amended claims 12, 16, and 17 to add the limitation "to inhibit c-Kit activity of said cKit kinase or mutant c-Kit kinase." The amendment is supported throughout the Specification; no new matter has been added.

Applicants thank the Examiner for the courtesy of a telephonic interview held on December 20, 2010, in which the pending rejections and the claims were discussed. While no decision as to allowability of one or more of the claims was reached, Applicants appreciate the Examiner's comments and careful consideration of the present case.

In light of the amendments and the remarks herein, Applicants respectfully request reconsideration and allowance of the pending claims.

#### Withdrawal of Claims

The Examiner again withdrew claims 16, 21, 28, and 35 as drawn to non-elected subject matter. Applicants respectfully disagree for the reasons on record submitted in their prior responses, to which the Examiner has not directly responded. The Restriction Requirement dated July 17, 2007 stated that Group II included original claims 12-17, drawn to a "method of treatment" using a c-Kit kinase inhibitor. The Restriction Requirement went on to indicate that if Group II was elected, a species of cancer for claims 13-14 (see page 6 of the Restriction Requirement) was required. Original claim 16 was directed to a method of treating mastocytosis, allergy, or asthma, and was included in the claims indicated by the Examiner to fall in Group II (i.e., claims 12-17). Applicants subsequently elected Group II, and indicated that claims 12-15 and 17 of Group II read on the species of small cell lung cancer. In subsequent Office Actions, the Examiner did not withdraw claim 16 as drawn to non-elected subject matter or issue another Restriction Requirement. Applicants respectfully assert that while claim 16 does not read on the elected species, it does fall within the elected Group II, drawn to a method of treatment using a c-

Kit kinase inhibitor. Applicants respectfully request that the Examiner reconsider the withdrawal of claims 16, 21, 28, and 35.

Rejections under 35 U.S.C. § 103

The Examiner rejected claims 12, 14, 17-18, 20, 22-27, 29-34, and 36-37 under 35 U.S.C. § 103 as being unpatentable over Funahasi (WO 02/032872, hereinafter "Funahasi") in view of CancerCare (of record) in view of Micke *et al.* (Clinical Cancer Res. vol. 9, 188-194, January 2003) ("Micke"). In addition, the Examiner rejected the claims over Funahasi in view of CancerCare in view of Sekido (Cancer Research 51:2416-2419, May 1, 1991) ("Sekido"). In particular, the Examiner reiterated her previous comments regarding the teachings of Funahasi, including that Funahasi discloses the elected compound for use in treating cancers, including lung cancer; that CancerCare teaches that the elected small cell lung cancer (SCLC) is one type of lung cancer; that Micke discloses that c-Kit is a "prognostic" factor for SCLC; and that Sekido discloses that c-Kit expression in SCLC reflects the "unique" biological nature of SCLC as compared to non-SCLC. The Examiner concluded that one of ordinary skill in the art would have been motivated to use the elected compound in the claimed methods because Funahasi teaches it as an effective lung cancer therapeutic agent and because Micke and Sekido teach c-Kit expression as, respectively, a prognostic factor or unique factor in the elected SCLC, and thus that a person having ordinary skill in the art would have been motivated to determine c-Kit expression to "confirm" the diagnosis of small-cell lung cancer. The Examiner acknowledged, however, that none of the references disclosed the c-Kit inhibiting properties of the elected compound.

As indicated in the interview and prior responses, Applicants respectfully disagree with the rejections. Independent claims 12 and 17, as presently pending, recite steps of determining if a patient's cancer or a cell, respectively, expresses c-Kit kinase or a mutant c-Kit kinase. As acknowledged by the Examiner, Funahasi is silent as to the inhibitory activity of the elected compound on c-Kit kinase. Moreover, Funahasi also does not disclose the expression of c-Kit in any cancer, let alone the elected small cell lung cancer, nor does Funahasi disclose or suggest

that one should determine if a patient's cancer or a particular cell of interest expresses c-Kit kinase or a mutant c-Kit kinase before administration of one of the Funahasi compounds. One of ordinary skill in the art would thus find no reason or motivation to modify the cancer treatment methods in Funahasi to perform an additional step of determining c-Kit or mutant c-Kit expression prior to administration of a Funahasi compound for treating a cancer. The Examiner has provided no logical rationale why one having ordinary skill in the art would so modify the treatment methods of Funahasi to include the recited determining step given Funahasi's silence as to the c-Kit inhibiting property of the recited molecule.

Micke and Sekido, either alone or in combination with Funahasi and CancerCare, fail to cure the deficiencies of Funahasi. Merely because Micke and Sekido teach that c-Kit is expressed in small-cell lung cancer provides no logical reason for one having ordinary skill in the art to modify the methods of Funahasi to add an additional step to determine if a patient's cancer or a cell expresses c-Kit before administration of the recited compound, particularly given the fact that Funahasi, Micke, and Sekido are all silent as to the c-Kit inhibiting properties of the recited compound. The Examiner has provided no rationale why the mere fact that (some) small cell lung cancers may express c-Kit would prompt one having ordinary skill in the art to insert a step of determining if a patient's cancer or a cell expresses c-Kit prior to administering a Funahasi compound for treating cancer, when Funahasi, Micke, and Sekido are silent as to the c-Kit inhibiting properties of the elected compound. The Examiner has provided no logical rationale why a person having ordinary skill in the art would logically be prompted to "confirm" a diagnosis of SCLC when the cited art provides no rationale to undertake such a confirmation of a *previously diagnosed* SCLC in the patient. Moreover, Applicants note that Sekido and Micke are conflicting as to whether or not SCLCs express c-Kit. While Sekido notes that most SCLCs express c-Kit, Micke notes that only 37% of its samples expressed c-Kit. Thus a person having ordinary skill in the art, given Sekido and Micke's contrasting findings, would have understood that a "confirmation" of SCLC based on c-Kit expression was unpredictable. Applicants further respectfully assert that the Examiner's "confirmatory" rationale would improperly render obvious any method wherein any biomarker for a specific cancer is evaluated before treatment

with any cancer drug effective for that specific cancer, as the Examiner has provided no logical nexus here between the particular biomarker measuring step and the particular drug for treatment. Micke's and Sekido's total lack of disclosure and appreciation of the elected compound's c-Kit inhibiting property precludes a finding that one having ordinary skill in the art would be motivated by their teachings to modify Funahasi to include a step of determining c-Kit or mutant c-Kit expression. Applicants note that the Federal Circuit has held that the inherency of an advantage and its obviousness are entirely different questions (In re Dillon, 919 F.2d 688, 16 USPQ2d 1897 (Fed. Cir. 1990)). "[A] retrospective view of inherency is not a substitute for some teaching or suggestion which supports the selection and use of the various elements in the particular claimed combination" (In re Newell, 891 F.2d 899, 13 USPQ2d 1248 (Fed. Cir. 1989)). Accordingly, Applicants respectfully assert that the Examiner has not made out a *prima facie* case of obviousness, and request withdrawal of the rejections.

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### CONCLUSIONS

Applicants respectfully assert that the present claims are in condition for allowance, which action is hereby requested. The Examiner is invited to telephone the undersigned if such would expedite prosecution.

Enclosed is a Petition for Extension of Time (one month). Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

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/Teresa A. Lavoie/  
Teresa A. Lavoie, Ph.D.  
Reg. No. 42,782

Customer Number 26211  
Fish & Richardson P.C.  
Telephone: (612) 335-5070  
Facsimile: (877) 769-7945